

**REMARKS**

Claims 1-4, 6-10, 14 and 26-31 are pending in this application. By this Amendment, claims 1, 7 and 8 are amended for clarity and these amendments are unrelated to issues of patentability.

Entry of the amendments is proper under 37 C.F.R. §1.116 because the amendments do not raise any new issues requiring further search and/or consideration. More specifically, the above amendments are merely for clarity and do not raise any new issues. Entry is therefore proper under 37 C.F.R. §1.116.

The Office Action rejects claims 1-4, 6-10 and 14, 26-31 under 35 U.S.C. §103(a) over U.S. Patent 6,483,820 to Davidson and further in view of U.S. Patent 6,590,865 to Ibaraki et al. (hereafter Ibaraki). Further, the Office Action rejects claims 10, 14, 26 and 37 over Davidson, Ibaraki and further in view of U.S. Publication 20020114301 to Yee et al. (hereafter Yee). Still further, the Office Action rejects claim 4 over Davidson, Ibaraki and in further view of U.S. Patent 5,960,039 to Martin et al. (hereafter Martin). The rejections are respectfully traversed.

Independent claim 1 recites that a mobile switching system subtracts an occupied channel bandwidth from a maximum allowable channel bandwidth to determine whether there is a minimum available bandwidth in each channel, and allocates the channel having the least occupied bandwidth when no channel has the minimum available bandwidth and allocates the channel having the least available bandwidth when a channel exists having the minimum available bandwidth.

In addressing independent claim 1, the Office Action (bottom of page 2) states that Davidson does not specifically teach wherein a mobile switching system subtracts an occupied channel bandwidth from a maximum allowable channel bandwidth to determine whether there is a minimum available bandwidth in each channel, and allocates the channel having the least occupied bandwidth when no channel has the minimum available bandwidth. Applicant respectfully submits that Davidson and Ibaraki do not teach or suggest these features.

After stating the features that Davidson does not teach, the Office Action asserts that Ibaraki discloses allocating the channel having the least occupied bandwidth when no channel has the minimum available bandwidth. The Office Action cites Ibaraki's col. 11, lines 21-56 and col. 12, lines 9-61. However, these sections of Ibaraki do not relate to allocation of a channel when no channel has a minimum available bandwidth. For example, Ibaraki teaches when a sum of minimum bandwidths is larger than a total amount, it is decided NO. See col. 12, lines 15-16; and FIG. 2. When it is decided NO in step S13, allocation is impossible. See Ibaraki's col. 12, lines 60-64.

When allocation is impossible, Ibaraki discloses reviewing priority of the resource allocation request (S31). An allocated resource may be released and/or a NACK may be transmitted back to the resource allocation means 21 and wait for another request. See Ibaraki's col. 12, line 60-col. 13, line 3. Applicant also specifically notes that the discussion on pages 8-9 of the Office Action does not address the claimed features relating to a channel having a least occupied bandwidth when no channel has the minimum available bandwidth.

For at least the reasons set forth above, Ibaraki does not teach allocating a channel when no channel has a minimum available bandwidth. Furthermore, Ibaraki and Davidson do not teach or suggest allocating the channel having the least occupied bandwidth if no channel has a minimum available bandwidth, as recited in independent claim 1. Accordingly, independent claim 1 defines patentable subject matter at least for this reason.

Independent claim 7 also defines patentable subject matter for at least similar reasons. That is, independent claim 7 recites that a mobile switching system allocates a channel having the largest available bandwidth when a requested bandwidth of the data call is greater than a prescribed bandwidth and the channel having an available bandwidth exists and the mobile switching system allocates a channel having the least occupied bandwidth when the requested bandwidth of the data call is greater than the prescribed bandwidth and the channel having the available bandwidth does not exist.

The Office Action appears to assert (on page 4, lines 8-11) that Davidson discloses that the mobile switching system allocates a channel having the least available bandwidth if a requested bandwidth of the data call is greater than a prescribed bandwidth and the channel having the available bandwidth exists. The Office Action cites Davidson's col. 4, lines 12-60; col. 5, lines 1-45 and col. 6, lines 12-65. The Office Action does not address the features of independent claim 7 that are not taught or suggested by Davidson. However, the Office Action appears to reference claim 1 (on page 4, lines 11 of the Office Action). Therefore, applicant assumes that the Office Action is asserting that Ibaraki discloses allocating a channel having the least occupied bandwidth when the requested bandwidth of the data call is greater than the

prescribed bandwidth and the channel having the available bandwidth does not exist, as recited in independent claim 7.

For at least similar reasons as set forth above with respect to claim 1, Ibaraki does not teach or suggest allocating a channel when the available bandwidth does not exist. Additionally, Ibaraki and Davidson do not teach or suggest that the mobile switching system allocates a channel having the least occupied bandwidth when the requested bandwidth of the data call is greater than the prescribed bandwidth and the channel having the available bandwidth does not exist. Accordingly, independent claim 7 defines patentable subject matter at least for this reason.

Independent claim 8 also defines patentable subject matter for at least similar reasons. That is, independent claim 8 recites that the mobile switching system allocates a channel having the least occupied bandwidth when the requested bandwidth of the data call is smaller than the prescribed reference bandwidth and the channel having the available bandwidth does not exist.

The Office Action (on pages 4-5) asserts that Davidson teaches allocating a channel having the least occupied bandwidth if the requested bandwidth of the data call is smaller than the prescribed reference bandwidth and the channel having the available bandwidth exists. In particular, the Office Action cites Davidson's col. 4, lines 12-60; col. 5, lines 1-45 and col. 6, lines 12-65. The Office Action does not address the other features that are not taught or suggested by Davidson. However, the Office Action appears to reference claim 1 (on page 5, line 2 of the Office Action). Therefore, applicant assumes that the Office Action is asserting that Ibaraki discloses allocating a channel having a least occupied bandwidth when the requested

bandwidth of the data call is smaller than the prescribed reference bandwidth and the channel having the available bandwidth does not exist, as recited in independent claim 8.

For at least similar reasons as set forth above with respect to claim 1, Ibaraki does not teach or suggest allocating a channel when the channel having the available bandwidth does not exist. Accordingly, Ibaraki and Davidson do not teach or suggest that the mobile switching system allocates a channel having the least occupied bandwidth when the requested bandwidth of the data call is smaller than the prescribed reference bandwidth and the channel having the available bandwidth does not exist. Accordingly, independent claim 8 defines patentable subject matter at least for this reason.

Furthermore, independent claim 14 defines patentable subject matter at least for similar reasons. That is, independent claim 14 recites determining whether the requested bandwidth is greater than a reference bandwidth, computing a bandwidth occupied by the connected data calls, subtracting the occupied bandwidth from a maximum allowable bandwidth for each  $H_0$  channel, to determine whether any available bandwidth exists in each  $H_0$  channel. Independent claim 14 also recites allocating an  $H_0$  channel having the least occupied bandwidth if no  $H_0$  channel exists, allocating a  $H_0$  channel having the largest available bandwidth if the requested bandwidth is greater than the reference bandwidth and a  $H_0$  channel having available bandwidth exists and allocating a  $H_0$  channel having the least available bandwidth if the requested bandwidth is smaller than the reference bandwidth and a  $H_0$  channel having available bandwidth exists.

In addressing independent claim 14, the Office Action (at the bottom of page 5) asserts that Davidson discloses determining whether a requested bandwidth is greater than a reference bandwidth and computing a bandwidth occupied by the connected data calls. The Office Action cites Davidson's col. 4, lines 12-16; col. 5, lines 1-45 and col. 6, lines 12-64. However, the Office Action also states that Davidson does not teach subtracting the occupied bandwidth from a maximum allowable bandwidth for each  $H_0$  channel, to determine whether any available bandwidth exists in each  $H_0$  channel, and an  $H_0$  channel having the least occupied bandwidth if no  $H_0$  channel exists. The Office Action also states that Davidson does not teach allocating the  $H_0$  channel having the largest available bandwidth if the requested bandwidth is greater than the reference bandwidth and an  $H_0$  channel having bandwidth exists and allocating a  $H_0$  channel having the least available bandwidth if the requested bandwidth is smaller than the reference bandwidth.

The Office Action then asserts that Ibaraki discloses allocating an  $H_0$  channel having the least occupied bandwidth if no  $H_0$  channel exists. The Office Action cites Ibaraki's col. 3, lines 1-64, col. 11, lines 21-56, col. 12, lines 9-61. However, for at least similar reasons as set forth above, Ibaraki does not teach or suggest these features of independent claim 14 missing from Davidson. Yee also does not teach or suggest these missing features. Accordingly, independent claim 14 defines patentable subject matter at least for this reason.

Each of the dependent claims depends from one of the independent claims and therefore defines patentable subject matter at least for this reason. In addition, the dependent claims recite features that further and independently distinguish over the applied references.

Serial No. 09/738,309  
Reply to Office Action of July 27, 2005


Docket No. P-0156

### **CONCLUSION**

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1-4, 6-10, 14 and 26-31 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, **David C. Oren**, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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**Date: November 25, 2005**

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